

**AMENDMENTS TO THE CLAIMS:**

Please replace the claims with the claims provided in the listing below wherein status, amendments, additions and cancellations are indicated.

1. (Currently Amended) Pharmaceutically or cosmetically active Composition comprising agents [ , ] obtained by the conversion of biomasses ~~consisting of lipid-containing microalgae, macroalgae, marine fungi, cyanobacteria, or marine bacteria marine organisms~~ into lipid-containing microparticles and/or micro- and nanoparticles.

2. (Currently Amended) Composition Agents according to claim 1, wherein said microparticles and/or nanoparticles characterised in that they have a mean diameter of 10 nm - 10  $\mu$ m.

3. (Currently Amended) Composition Agents according to claim 1 or 2, further comprising characterised in that they additionally contain one or more pharmaceutical or cosmetic active substances.

4. (Currently Amended) Composition Agents according to claim 1 or 2, further comprising characterised in that they additionally contain one or more mineral

substances and/or radical scavengers and/or dietary supplements and/or vitamins, in particular vitamin C.

5.(Currently Amended) Composition Agents according to claim 1 or 2, further comprising characterised in that they additionally contain one or more clay minerals (phyllosilicates), in particular bentonite with a diameter <2  $\mu$ m.

6.(Currently Amended) Composition Agents according to claim 3, wherein said active substances comprise characterised in that they contain

- a) Xanthones or their derivatives and/or
- b) Ubiquinones with a chain length of n = 1 to n= 15 and/or
- c) Inorganic thiocyanates and/or
- d) Hydrothiocyanates of organic bases and/or
- e) Trihydroxybenzaldehyde or its derivatives and/or
- f) DNA

as active substances.

7.(Currently Amended) Composition Agent according to claim 1 or 2, further comprising characterised in that they contain norlichexanthone.

8.(Currently Amended) Composition Agents according to one of the claim 1 or 2, further comprising characterised in that they additionally contain one or more dispersion-stabilizing substances.

9.(Currently Amended) Composition Agents according to claim 1 or 2, wherein said lipid-containing microalgae, macroalgae, marine fungi, cyanobacteria, or marine bacteria comprise characterised in that as lipid-containing marine organisms

- a) cyanobacteria Cyanobacteria from the class Oscillarioles, in particular the strains ~~SPH 03, SPH 04, SPH 05, SPH 06, SPH 09, SPH 10, SPH 11, SPH 12, SPH 13, SPH 14, SPH 20, SPH 21, SPH 22, SPH 23, SPH 25, SPH 26, SPH 29, SPH 32, SPH 34, SPH 37~~ and/or
- b) cyanobacteria from the class Nostocales, in particular the strains ~~SPH 18, SPH 20, SPH 27, SPH 28, SPH 38~~ and/or
- c) cyanobacteria from the class Chroococcales, in particular the strains ~~SPH 07a, SPH 07b, SPH 08, SPH 14, SPH 16, SPH 17, SPH 24, SPH 33, SPH 36, SPH 39, SPH 40, SPH 43~~ and/or
- d) cyanobacteria from the class Stigonematales and/or
- e) macroalgae Macroalgae from the genera Asparagopsis, Cystoseira, Codium, Dictyota, Dictyopteris, Enteromorpha, Fucus, Gelidium,

Gracilaria, Gracilariopsis, Halopteris, Hypoglossum, Laurencia, Plocamium, Polyneura, Sargassum, Solieria, and/or Ulva and/or

- f) Thraustochytrids from the genera Schizochytrium and/or and Thraustochytrium and/or
- g) Marine bacteria from the genera Photobacterium, Shewanella and/or and Colwellia

~~are employed.~~

10.(Currently Amended) Composition Agents according to claim 1 or 2, ~~wherein said characterised in that as lipid-containing microalgae, macroalgae, marine fungi, cyanobacteria, or marine bacteria marine organisms are cultivated lipid-containing marine organisms, in particular lipid-containing marine organisms cultivated in the presence of clay minerals, are employed.~~

11.(Currently Amended) Method for the production of ~~the pharmaceutically or cosmetically active composition agents~~ according to claim 1 or 2, comprising characterised in that converting biomasses of lipid-containing microalgae, macroalgae, marine fungi, cyanobacteria, or marine bacteria marine organisms are converted by homogenisation or emulsification into microparticles or nanoparticles micro- and nanoparticles with a diameter of 10 nm - 10  $\mu$ m.

12.(Currently Amended) Method according to claim 11, wherein said converting comprises: characterised by the following steps:

- Heating heating the microalgae, macroalgae, marine fungi, cyanobacteria, or marine bacteria marine microorganisms to liquify fatty acids contained therein, until the liquefaction of the fatty acids contained therein
- Optionally optionally adding one or more active substances or additives to said microalgae, macroalgae, marine fungi, cyanobacteria, or marine bacteria, to thereby obtain modified microorganisms,
- Mixing combining the microalgae, macroalgae, marine fungi, cyanobacteria, or marine bacteria biomass or the charged biomass or the modified microorganisms with a surfactant-water mixture heated to a temperature above the fatty acids' melting points, to obtain a combination and unification of the two phases
- Preparation preparing of a pre-suspension of said combination, and
- High conducting high pressure homogenization of said pre-suspension homogenisation in one or more homogenization homogenisation cycles,

13.(Currently Amended) Method according to claim 11, wherein said converting comprises 12, characterised in that the heating of the microorganisms and of the surfactant-water mixture is omitted and that forming modified microorganisms by adding one or more active substances or additives to said microalgae, macroalgae,

marine fungi, cyanobacteria, or marine bacteria for adsorption the active substances are adsorbed at room temperature or by dispersing said one or more active substances or additives in water and adding said dispersed one or more active substances or additives to said microalgae, macroalgae, marine fungi, cyanobacteria, or marine bacteria, at the lipid-containing marine microorganisms

combining the modified microorganisms with a surfactant-water mixture to obtain a combination, or are dispersed under the addition of a little quantity of water, preparing a pre-suspension of said combination, and conducting high pressure homogenization of said pre-suspension in one or more homogenization cycles.

14.(Currently Amended) Method according to claim 11, wherein said converting comprises: characterised by the following steps:

- Suspending suspending the microalgae, macroalgae, marine fungi, cyanobacteria, or marine bacteria and optionally additives in an organic solvent marine microorganisms and optionally the additives in an organic solvent to form a suspension,  
— and pre-dispersing the this mixture suspension to obtain a pre-dispersion,
- High conducting high pressure homogenization on said pre-dispersion to obtain homogenized product homogenisation and then conducting subsequent spray drying or lyophilization of said homogenized product to obtain spray dried or lyophilized

product,

- Redispersing dispersing said spray dried or lyophilized product in an aqueous surfactant solution to form a dispersion.
- Again dispersing said dispersion to form a second dispersion dispersion and conducting high pressure homogenization of said second dispersion homogenisation in one or more homogenization homogenisation cycles.

15.(Currently Amended) Method according to claim 11, wherein said converting comprises: characterised by the following steps:

- Formation forming of an emulsion of water and said biomass and optionally with the additives,
- Dissolving dissolving the emulsion in an appropriate organic solvent to obtain a dissolved emulsion,
- Adding adding a water-soluble co-surfactant to said dissolved emulsion to form a modified dissolved emulsion and pre-dispersing said modified dissolved emulsion to form a pre-dispersion,
- High conducting high pressure homogenization on said pre-dispersion to form homogenized product homogenisation and removing removal of the solvent from said homogenized product.

16.(Currently Amended) Method of using Use of biomasses of lipid-containing microalgae, macroalgae, marine fungi, cyanobacteria, or marine bacteria marine organisms as a carrier for active substances, comprising adding said active substances to said biomasses.

17.(Currently Amended) Method of using the composition according to claim 1 as a Use of the biomasses of lipid-containing marine organisms in the form of micro- and nanoparticles according to claim 1 as pharmaceutically or cosmetically active agent agents, comprising applying said composition as a pharmaceutical or cosmetic, said microparticles or nanoparticles optionally containing a pharmaceutical or a cosmetic agent.

18. (Currently Amended) Method of using the composition according to claim 1 as a foodstuff additive, Use of biomasses of lipid-containing marine organisms in the form of micro- and nanoparticles according to claim 1 as foodstuff additivescomprising adding said compositon to a foodstuff.

19.(Currently Amended) Method of using the composition according to claim 1 Use of biomasses of lipid-containing marine organisms in the form of micro- and nanoparticles according to claim 1 for the production of cosmetics or pharmaceuticals

or foodstuffs, comprising mixing said composition with cosmetics, pharmaceuticals, or foodstuffs.

20. (Cancelled)

21. (Currently Amended) Method of using the composition according to claim 1 for gene transfer, comprising Use according to any one of claims 17 to 19 mixing genes for transfer with said microparticles or nanoparticles, for gene transfer.

22. (Currently Amended) Method of using the composition according to claim 1 Use of biomasses of lipid-containing marine organisms in the form of micro- and nanoparticles according to claim 1 for preventing the binding of nosocomially important air-spread germs to receptors on the skin or tissues and/or preventing growth of said germs their growth on the skin or tissues, comprising applying said composition to the skin or tissues.

23. (Currently Amended) Method of using the composition according to claim 1 Use according to claim 22 for the improvement of the natural barrier function of the skin and/or for modifying the skin milieu, comprising applying said composition to skin.

24.(Currently Amended) Method of using the composition Use of biomasses of lipid-containing marine organisms in the form of micro- and nanoparticles according to claim 1 for the prophylaxis of nosocomial infections, comprising applying said composition to regions vulnerable to nosocomial infections.

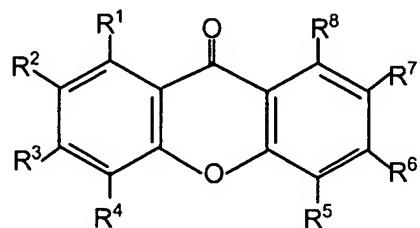
25.(Currently Amended) Method Use of using the composition according to claim 1 according to any one of claims 22 to 24 for inhibiting multiresistant *Staphylococcus aureus* strains, comprising applying said composition to skin or tissues vulnerable to multiresistant *Staphylococcus aureus* strains or exposing multiresistant *Staphylococcus aureus* strains to said composition, in particular methicilline-resistant strains of *S. aureus* (MRSA).

26.(Currently Amended) Method of using the composition according to claim 1 Use according to any one of claims 22 to 24 for cleaning up skin being contaminated with MRSA, comprising applying said composition to skin contaminated with MRSA.

27.(Currently Amended) Method of using the composition according to claim 1 Use according to any one of claims 22 to 24 for the skin care after the decolonization by means of bactericidal agents, comprising applying said

composition to skin which has been subjected to bactericidal agents that have effected decolonization of bacteria on said skin.

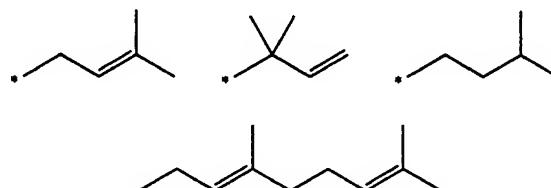
28.(Currently Amended) Method of using the composition according to claim 1, comprising Use according to any one of claims 22 to 24, applying said composition to skin or tissues wherein said microparticles or nanoparticles comprise in combination with xanthone derivatives of the formula



wherein R1-R8 can be selected from the following substituents listed in table 1[.]  
below:

TABLE 1

H, OH, OMe, OAc



Me, Ac, CH<sub>2</sub>OH, CHO, CF<sub>3</sub>, COOH, COOMe, CN, CONH<sub>2</sub>,  
Cl, F, NO<sub>2</sub>, NH<sub>2</sub>, NHAc, NMe<sub>2</sub>

29.(Currently Amended) Method of using the composition according to claim 1, comprising applying said composition to skin or tissue Use according to any one of claims 22 to 24, wherein said microparticles or nanoparticles comprise a vitamin, in combination with vitamins, in particular with vitamin C.

30.(Currently Amended) Method Use according to claim any one of claims 16 to 19, wherein said active substances comprise as a carrier for antibiotics.

31.(Currently Amended) Method of using the composition according to claim 1 Use according to any one of claims 17 to 19 comprising applying said composition to obtain for the a dosed release of antimicrobial active substances contained in said microparticles or nanoparticles and to obtain for simultaneous immunostimulation.

32.(Currently Amended) Method of using the composition according to claim 1, comprising Use according to any one of claims 17 to 19 applying said composition to areas adjacent an implant so as to provide in slow-release of active ingredients and prevent systems for the prevention of implant-associated infections.

33.(Currently Amended) Method of using the composition according to claim 1, comprising Use according to any one of claims 17 to 19 applying said composition so as to stimulate for the stimulation of leucocytes or so as to activate for the activation of the reticuloendothelial system.

34.(Currently Amended) Method of using the composition according to claim 1, wherein Use according to any one of claims 17 to 19 said composition is impregnated into for the impregnation of textile materials and/or materials produced on a cellulose basis or as covering materials for wound treatment.

35.(Currently Amended) The composition according to claim 1, Use according to any one of claims 17 to 19 wherein said microparticles or nanoparticles are in a the form of oils, sprays or and ointments.

36.(Currently Amended) Method of using the composition according to claim 1, comprising Use according to any one of claims 17 to 19 applying said composition

so as to obtain for the acceleration of cell growth.

37. (Currently Amended) Method of using the composition according to claim 1, comprising Use according to any one of claims 17 to 19 applying said composition so as to effect for the goal-directed substitution of deficiency syndromes.

38. (New) Composition according to claim 1, wherein said biomasses are biomasses of lipid-containing microalgae, macroalgae, cyanobacteria, or marine bacteria.

39. (New) Composition according to claim 1, wherein said biomasses are biomasses of lipid-containing microalgae, macroalgae, or marine bacteria.

40. (New) Composition according to claim 4, wherein said one or more mineral substances and/or radical scavengers and/or dietary supplements and/or vitamins comprises vitamin C.

41. (New) Composition according to claim 5, wherein said one or more clay minerals comprises bentonite with a diamater < 2  $\mu\text{m}$ .

42. (New) Composition according to claim 9, wherein

- a) said cyanobacteria from the class Oscillatoriales comprises at least one strain selected from the group consisting of: SPH 03, SPH 04, SPH 05, SPH 06, SPH 09, SPH 10, SPH 11, SPH 12, SPH 13, SPH 14, SPH 20, SPH 21, SPH 22, SPH 23, SPH 25, SPH 26, SPH 29, SPH 32, SPH 34, and SPH 37 and/or
- b) said cyanobacteria from the class Nostocales comprises at least one strain selected from the group consisting of: SPH 18, SPH 20, SPH 27, SPH 28, and SPH 38 and/or
- c) said cyanobacteria from the class Chroococcales comprises at least one strain selected from the group consisting of: SPH 07a, SPH 07b, SPH 08, SPH 14, SPH 16, SPH 17, SPH 24, SPH 33, SPH 36, SPH 39, SPH 40, and SPH 43.

43. (New) Composition according to claim 10, wherein said lipid-containing microalgae, macroalgae, marine fungi, cyanobacteria, or marine bacteria are cultivated in the presence of clay minerals.

44. (New) Composition according to claim 6, wherein said active substances comprise inorganic thiocyanates and/or hydrothiocyanates of organic bases and/or trihydroxybenzaldehyde or its derivatives and/or DNA.

45. (New) Method according to claim 25, wherein said multiresistant

*Staphylococcus aureus* strains comprise strains of methicilline-resistant strains of *Staphylococcus aureus* (MRSA).

46. (New) Method according to claim 29, wherein said vitamin is vitamin C.

47. (New) Method according to claim 13, wherein heating of the microalgae, macroalgae, marine fungi, cyanobacteria, or marine bacteria and of the surfactant-water mixture does not take place.

48. (New) Composition according to claim 9, wherein

a) said cyanobacteria from the class Oscillatoriales comprises at least one strain selected from the group consisting of: SPH 04, SPH 05, SPH 06, SPH 09, SPH 10, SPH 11, SPH 12, SPH 13, SPH 14, SPH 20, SPH 21, SPH 23, SPH 25, SPH 26, SPH 29, SPH 32, SPH 34, and SPH 37 and/or

b) said cyanobacteria from the class Nostocales comprises at least one strain selected from the group consisting of: SPH 18, SPH 20, SPH 27, SPH 28, and SPH 38 and/or

c) said cyanobacteria from the class Chroococcales comprises at least one strain selected from the group consisting of: SPH 07a, SPH 07b, SPH 08, SPH 14, SPH 16, SPH 17, SPH 24, SPH 33, SPH 36, SPH 39, SPH 40, and SPH 43.

49. (New) Composition according to claim 9, wherein said lipid-containing microalgae, macroalgae, marine fungi, cyanobacteria, or marine bacteria comprise cyanobacteria from the class Stigonematales and/or macroalgae from the genera *Asparagopsis*, *Cystoseira*, *Codium*, *Dictyota*, *Dictyopteris*, *Enteromorpha*, *Fucus*, *Gelidium*, *Gracilaria*, *Gracilariaopsis*, *Halopteris*, *Hypoglossum*, *Laurencia*, *Plocamium*, *Polyneura*, *Sargassum*, *Solieria*, and/or *Ulva* and/or

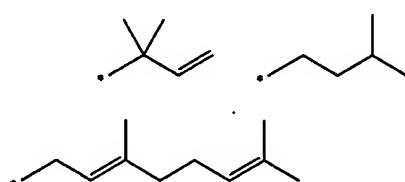
*Thraustochytrids* from the genera *Schizochytrium* and/or *Thraustochytrium* and/or

Marine bacteria from the genera *Photobacterium*, *Shewanella* and/or *Colwellia*.

50. (New) The method according to claim 28, wherein R1-R8 can be selected from the following substituents listed in table 1 below:

TABLE 1

H, OH, OMe, OAc



Me, Ac, CH<sub>2</sub>OH, CHO, CF<sub>3</sub>, COOH, COOMe, CN, CONH<sub>2</sub>, Cl, F, NO<sub>2</sub>, NH<sub>2</sub>, NHAc, NMe<sub>2</sub>